The Environmental Protection Agency's Office of Research and Development (ORD) seeks peer review and advice from the All Ages Lead Model (AALM) Panel regarding the scientific soundness of the AALM. ORD requests that the Panel address the following charge questions during its review:

1. Are the features of the AALM adequately described in the "Technical Support Document for the All Ages Lead Model (AALM) – Parameters, Equations, and Evaluations?"

2. Are the model features supported by available research findings in published peer-reviewed literature or by reasonable extrapolations from such findings?

3. In general, is the theoretical basis for the model adequately described in Chapter 2 (Theoretical Framework, Parameters, and Equations)? Are the following specifics regarding AALM, also adequately described?

    a. Values specified for the intake rates as a function of age for different media.

    b. Uptake/absorption parameters and parameters requiring modification for specific routes of exposure.

    c. Biokinetic parameters describing lead distribution and elimination.

    Additionally, please comment on any strengths or weaknesses in the justification provided for model assumptions (data inputs, methodology, etc.) and the quantitative impact of those assumptions on the model and its results.

4. What are the Panel's views of Chapter 3 (Evaluation and Development of AALM.FOR) with regard to the:

    a. Predictive accuracy and reliability of the AALM based on comparisons to available data sets.

    b. Extent to which the computer code implementing the model has been adequately verified and is operating as expected, based on the results comparing model predictions between applications of the AALM implemented in distinctly differing platforms.

    c. Availability of other datasets that may be useful for further model evaluation.

5. Is the "AALM Fortran Users Guide" sufficiently clear and useful in providing "user friendly" instructions for carrying out model runs for AALM applications? How might the AALM user's manual be improved?

6. How could specific features of the AALM be further refined to improve its predictive accuracy?

7. How could specific features of the AALM be further refined to make it more user friendly?

8. Is the AALM consistent with the Agency's Regulatory Environmental Model Guidance found at URL: http://cfpub.epa.gov/crem/?

9. What additional information (if any) about AALM might be useful to users who want to assess a hypothetical or real-world risk assessment problem, in order to facilitate the correct application of the model and to communicate its modeling outcomes correctly and efficiently?